

Ethnopteridology of the Chácobo Indians in Amazonian Bolivia

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The Chácobo are a small tribe of some 400 Indians belonging to the Panoan language family who live in an isolated rainforest region in northern Bolivia. During a six-month ethnobotanical study of the Chácobo living in the vicinity of the village Alto Ivon, a special effort was made to collect all the pteridophytes and to obtain indigenous names and information on use.

The village of Alto Ivon (11°45'S, 66°02'W) is located some 60 air miles south of Riberalta in the Bolivian department of Beni. The forest is Tropical Moist with a distinct dry season, generally from about June to October. The elevation is about 200 m and the terrain is level. The forest canopy is at about 25 m, and the species composition appears to be typical of southwestern Amazonia. The five ecologically most important tree families, as revealed by a 1 ha. inventory, are Moraceae, Myristicaceae, Palmae, Leguminosae sensu lato, and Vochysiaceae. This tree flora is not especially species-rich; only 94 species with a DBH greater than 10 cm were encountered in the hectare.

As with the trees, the pteridophyte flora is not particularly rich. Between Nov. 1983 and Apr. 1984, 13 genera and 25 species of pteridophytes were collected. If the species diversity was not impressive, what was quite interesting was the high degree of fern utilization. The Chácobo have uses for 16 species, or 65 percent of the total encountered in their territory. The uses are all medicinal in nature and generally involve the making of a decoction of fronds or rhizomes. No instances of ferns used as food were encountered.

In Table 1 an accounting is given of the ferns collected, the indigenous names, and the manner in which they are employed. Numbers listed are in the author's series, and vouchers are deposited at NY. Specimens were collected in the forest surrounding Alto Ivon, brought back to the village, and presented to Chácobo informants to elicit names and uses. Ten principal informants were used: Pae Chávez, Caco Soría, Yari Vargas, Tani Chávez, Cana Antelo, Pae Ortiz, Pae Davalos, María Soría, Caco Ortiz, and Rabi Ortiz. The last individual was the tribal chief at the time of the study and was responsible for transcribing my tape recorded interviews. When more than one name is given for a species, this represents the name elicited from a second informant and not an alternative name provided by the same informant. A guide to the pronunciation of names is given in Appendix 1.

I could not detect any general term comparable to "fern" in English. Chácobo fern names often encompass several botanical species (Table 2). Most of the names appear to be complex terms made up of common terms having other applications in the Chácobo language. Thus, *cashimëtsisi* can be broken down into *cashi* (= bat, the mammal) and *mëtsisi* (= claws); perhaps this alludes to the

TABLE 1. Ferns of the Chácobo Indians.

<i>Adiantopsis radiata</i> (L.) Fée: <i>mitaisa</i> (5048), not used.
<i>Adiantum glaucescens</i> Kl.: <i>mitaisi</i> (4813), frond decoction used to bathe children who have high fever; <i>xëqui nihijahëhua</i> (4997), not used.
<i>Adiantum lucidum</i> (Cav.) Sw.: <i>mitaisi</i> (4704), frond decoction used to bathe children who have high fever; <i>mitahitsa</i> (5010), not used; <i>xëquitaxo</i> (4090), frond decoction drunk to cure rheumatism.
<i>Adiantum obliquum</i> Willd.: <i>xëquihuitaxo</i> (4076), frond decoction drunk to cure diarrhea; <i>xëquitaxo</i> (4085), frond decoction drunk to cure rheumatism.
<i>Adiantum petiolatum</i> Desv.: <i>xëquihuitaxo</i> (4077), frond decoction drunk to cure diarrhea.
<i>Adiantum tomentosum</i> Kl.: <i>mitaisa</i> (5061), not used.
<i>Asplenium pearcei</i> Baker: <i>mitaisa jahëhua</i> (5051), not used; <i>jonotasi</i> (4127), frond decoction drunk to cure stomachache.
<i>Ctenitis protensa</i> (Afz.) Ching: <i>toriahuitaxo</i> (4812), rhizome shavings boiled and cooled decoction drunk to cure appendicitis.
<i>Ctenitis submarginalis</i> (Langsd. & Fisch.) C. Chr.: <i>toriahuitaxo</i> (4998), rhizome shavings placed directly on skin over appendix to relieve pain of appendicitis; <i>jinaristi</i> (4124), frond decoction drunk to alleviate headache.
<i>Cyathea</i> sp.: <i>capëtëjiquërëxë</i> (4088), frond decoction drunk to relieve pain of appendicitis.
<i>Hecistopteris pumila</i> (Spreng.) J. Smith: no Chácobo name (4403), not used.
<i>Lindsaea divaricata</i> Kl.: <i>toriahuitaxo</i> (4730), rhizome shavings boiled and cooled decoction drunk to cure appendicitis.
<i>Lindsaea lancea</i> (L.) Brade var. <i>lancea</i> : <i>xëqui jahuëhua</i> (4911), frond decoction used to bathe hyperactive children.
<i>Lindsaea portoricensis</i> Desv.: <i>mitaisa</i> (5049), not used.
<i>Lomagramma guianensis</i> (Aubl.) Ching: no Chácobo name (4743, 4799), not used.
<i>Lomariopsis japurensis</i> (Mart.) J. Smith: <i>toriahuitaxo</i> (5020), not used; <i>cashimëtsisi</i> (4089) two drops of stipe exudate mixed with water and this solution drunk to alleviate stomachache.
<i>Metaxya rostrata</i> (Willd.) Presl: <i>xëqui jahuë</i> (5047), not used.
<i>Polypodium bombycinum</i> Maxon: <i>jihui ratsamica nishi</i> (5036), rhizome scrapings macerated in cold water and resulting paste is put directly on skin over appendix to cure appendicitis.
<i>Polypodium</i> (<i>Campyloneurum</i>) aff. <i>brevifolium</i> Link: <i>jonotasi</i> (4128), frond decoction drunk to cure stomachache.
<i>Polypodium</i> (<i>Phlebodium</i>) <i>decumanum</i> Willd.: <i>jonotasi</i> (4889), not used.
<i>Polypodium</i> (<i>Microgramma</i>) <i>megalophyllum</i> Desv.: <i>cashimëtsisi</i> (4019), frond decoction drunk to alleviate stomachache.
<i>Polypodium</i> sp.: <i>mitaisa</i> (5050), <i>xëqui jahëhua</i> (4380), not used.
<i>Thelypteris</i> (<i>Goniopteris</i>) <i>abrupta</i> (Desv.) Proctor, vel aff.: <i>xëqui jahuëhua</i> (5014), not used.
<i>Trichomanes pinnatum</i> Hedw.: <i>jorojina</i> (4640), not used; <i>mitahuisma</i> (4130), frond decoction drunk to cure diarrhea.
<i>Trichomanes vittaria</i> Poir.: <i>jorojina</i> (4023), reportedly used as a medicinal, but informant could not be more specific.

small curved scales on the rhizome. Other names, like *mitaisi*, appear to be simple, proper nouns applying only to those particular species. Of course, it is possible that *mitaisi* has a non-fern meaning unknown to me or to the linguists of the Summer Institute of Linguistics who have studied the language and have prepared a dictionary (unpublished). A translation of name components is given in Table 2.

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TABLE 2. Chácobo Fern Names.

capētējiquērēxē [capētē (cayman); ji (line, tail); quērēxē (arrow head with several barbs)]— <i>Cyathea</i> sp.
cashimētsisi [cashi (bat, the mammal); mētsisi (claws, fingernails)]— <i>Lomariopsis japurensis</i> ; <i>Polypodium</i> (<i>Microgramma</i>) <i>megalophyllum</i>
jihui ratsamica nishi [jihui (tree); ratsamica (to climb, grasping tightly); nishi (liana)]— <i>Polypodium bombycinum</i>
jinaristi [jina (line, tail)]— <i>Ctenitis submarginalis</i>
jonotasi— <i>Asplenium pearcei</i> ; <i>Polypodium</i> (<i>Campyloneurum</i>) aff. <i>brevifolium</i> ; <i>Polypodium</i> (<i>Phlebodium</i>) <i>decumanum</i>
jorojina [jina (line, tail)]— <i>Trichomanes pinnatum</i> ; <i>Trichomanes vittaria</i>
mitahitsa— <i>Adiantum lucidum</i>
mitahuisma— <i>Trichomanes pinnatum</i>
mitaisa— <i>Adiantopsis radiata</i> ; <i>Adiantum tomentosum</i> ; <i>Lindsaea portoricensis</i> ; <i>Polypodium</i> sp.
mitaisa jahēhua [jahēhua (mother)]— <i>Asplenium pearcei</i>
mitaisi— <i>Adiantum glaucescens</i> ; <i>Adiantum lucidum</i>
toriahuitaxo— <i>Ctenitis protensa</i> ; <i>Ctenitis submarginalis</i> ; <i>Lindsaea divaricata</i> ; <i>Lomariopsis japurensis</i>
xēqui huitaxo [xēqui (maize)]— <i>Adiantum obliquum</i> ; <i>Adiantum petiolatum</i>
xēqui jahuē [xēqui (maize); jahuē (thing, something)]— <i>Metaxya rostrata</i>
xēqui jahuēhua [xēqui (maize); jahuēhua (that which is larger than . . .)]— <i>Lindsaea lancea</i> var. <i>lancea</i> ; <i>Polypodium</i> sp.; <i>Thelypteris</i> (<i>Goniopteris</i>) <i>abrupta</i>
xēqui nihi jahēhua [xēqui (maize); nihi (forest); jahēhua (mother)]— <i>Adiantum glaucescens</i>
xēqui taxo [xēqui (maize)]— <i>Adiantum lucidum</i> ; <i>Adiantum obliquum</i>

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APPENDIX 1. Pronunciation of Chácobo names.

After studying the Chácobo language, the Summer Institute of Linguistics devised a written form employing symbols that were as similar as possible to Spanish. Under their system there are 21 symbols in the Chácobo alphabet. These are listed below with my interpretation of their Spanish or English equivalent sound.

a = Spanish a. b = Spanish b. c = Spanish c. ch = Spanish ch. ē = no exact equivalent; intermediate in sound to the Spanish u and e; unrounded midcentral vowel as in the English word hurt. h = no exact equivalent; similar in sound to a "hard" English h, executed with a glottal stop. hu = no exact equivalent; similar to the English sound wh. i = Spanish i. j = Spanish j. m = Spanish m. n = Spanish n. o = Spanish o. p = Spanish p. qu = no exact equivalent; similar in sound to the English kw. r = Spanish single-trill r. s = Spanish s. sh = no exact equivalent; similar in sound to the English sh. t = Spanish t. ts = no exact equivalent; similar in sound to the English ts, executed with a strong oral explosive. x = no exact equivalent; similar in sound to the English sh. y = Spanish y.